

(19)



Europäisches Patentamt

European Patent Office

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(11)

**EP 0 822 404 A3**

(12)

**EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
03.11.1999 Bulletin 1999/44

(51) Int. Cl.<sup>6</sup>: **G01N 15/14**, **G01N 21/64**,  
**G02B 7/00**

(43) Date of publication A2:  
04.02.1998 Bulletin 1998/06

(21) Application number: 97112321.1

(22) Date of filing: 18.07.1997

(84) Designated Contracting States:  
**AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC  
NL PT SE**

(30) Priority: 30.07.1996 US 692933  
30.07.1996 US 692931  
30.07.1996 US 688559  
30.07.1996 US 692934  
30.07.1996 US 692930

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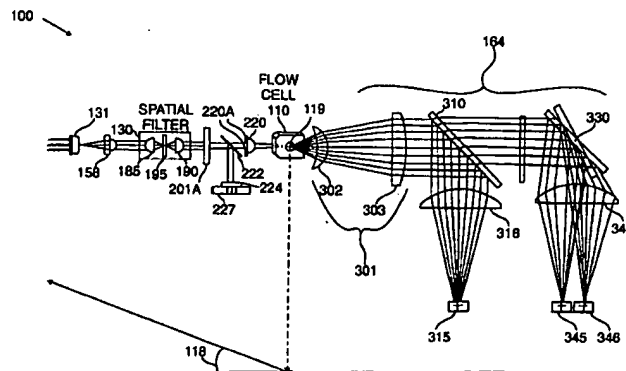
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**(54) Optical system for a hematology analytical instrument**

(57) An optical illuminator assembly for an analytical instrument, such as a clinical hematology or a flow cytometer instrument, and method of aligning the components of the illuminator assembly (130,381) and orienting the illuminator assembly (130,381). The illuminator assembly (130,381) includes a plurality of optical components, such as a laser source (131), e.g., a laser diode (131), optionally a spatial filter (185,190,195), a beam shaping aperture (201A,220A), and a focusing lens (220,387b). The optical components are mounted in or to a housing (121A,3020) and

are internally oriented with respect to the housing (121A,3020) to produce a focussed laser beam output. The housing is in turn mounted on an alignment mechanism (3040) which can move the focussed beam in four degrees of freedom, thereby to direct the focussed beam to a particular location. Thus, a factory alignment and a low cost prealigned optical illuminator assembly is obtained, which can be easily oriented for use in an instrument.

**FIG. 1**



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EP 97 11 2321

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Place of search MUNICH		Date of completion of the search 9 September 1999	Examiner Müller, T
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